

City of Lubbock

Water Quality Report 2009

July 2010

Water is essential to sustain life and business in Lubbock. Therefore, in 2007, the City Council adopted a Strategic Water Supply Plan that included using Lake Alan Henry as a water supply. Based on the continual decline in Lake Meredith's water levels, the Lake Alan Henry Water Supply Project has become a high priority with an expected completion date of 2012.

The Lake Alan Henry project began in 1991 with the construction of the John T. Montford Dam. The new reservoir was completed in November of 1993. Engineers have determined that the Lake can provide about 20,000 acre-feet of water annually or about half of the water needed by the City today. The construction of the infrastructure necessary to bring the Lake Alan Henry water to Lubbock is underway. Construction includes the following projects:

Raw Water Pipeline

Fifty miles of raw water pipeline is needed to bring the lake water to Lubbock. The raw water pipeline construction is divided into three separate construction contracts consisting of approximately 17 miles in each segment. The first segment is already under construction and stretches from Lake Alan Henry to Post, Texas. The second segment of the raw water pipeline stretches from Post, Texas to Southland, Texas and the third segment stretches from Southland, Texas to Lubbock. Construction on the second and third segments of raw water pipeline should begin in December 2010.

Booster Pump Stations

Two pump stations are needed to transport the raw water to Lubbock. One pump station will be located at Lake Alan Henry and one near the City of Post. Construction on both these pump stations should begin by August 2010.

South Lubbock Water Treatment Plant and Terminal Storage Reservoir

These facilities are located southeast of Lubbock and are necessary to treat the raw water coming from Lake Alan Henry. Both of these facilities are currently under construction. The capacity of the treatment plant is 15 million gallons per day. The storage reservoir will hold 225 million gallons. This facility should be able to satisfy approximately 20% of the City's current water needs.

Treated Water Pipeline

Fifteen miles of treated water pipeline will transport water from the South Lubbock Water Treatment Plant to southeast, south, and southwest Lubbock. The first phase of this contract should be under construction by August 2010 and the second phase by December 2010.

Lake Alan Henry will be one of Lubbock's most important water supplies for many years to come. The cost of the entire water supply project, including the earlier dam construction, is approximately \$300 million.

With this new water supply, water will be delivered to Lubbock from Lake Meredith and the Roberts County Well Field through the Canadian Municipal Water Authority, Lake Alan Henry, and the Bailey County Well Field. These combined sources will help guarantee that Lubbock has water for many years to come.

Where Does Our Water Come From?

The City of Lubbock's drinking water comes from both surface and groundwater sources. The Canadian River Municipal Water Authority (CRMWA) provides 75-85% of Lubbock's water supply from Lake Meredith and from Roberts County well field. Lake Meredith is located by Sanford, Texas, about 164 miles north of Lubbock, and the Roberts County well field is located about 40 miles east of Lake Meredith. The City owned Bailey County Well Field (BCWF) provides 15-25% of the City's water supply and is located about 65 miles northwest of Lubbock. During 2009, the citizens of Lubbock used 11.7 billion gallons of water with 9.6 billion gallons supplied by CRMWA and 2.1 billion gallons came from BCWF.

Source Water Assessment

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water the City of Lubbock provides to our customers. The analysis was made by using data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what is in your drinking water. This report represents data for the year 2009.

What Do You Know About Bottled Water?

When drinking water meets federal standards there may not be any health-based benefits to purchasing bottled water or point of use devices. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information concerning taste, odor or color of drinking water, please call 775-2588. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Helpful Definitions for Reading this Report

Maximum Contaminant Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL) – The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Action Level (AL) – The concentration of a contaminant which, if exceeded triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.

Part per million (ppm) – One part per million or milligrams per liter. For example, if you had one million dollars, one part per million would equal one dollar.

Part per billion (ppb) – One part per billion or micrograms per liter. For example, if you had one billion dollars, one part per billion would equal one dollar.

NTU – nephelometric turbidity units (a measure of turbidity)

pCi/L – picocuries per liter (a measure of radioactivity)

Maximum Residual Disinfectant Level (MRDL) – The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Important Information for Your Consideration

Special Information for People with Weakened Immune Systems

Some people may be more vulnerable to microbial contaminants in drinking water than the general population. Infants, some elderly or immuno-compromised persons such as those undergoing chemotherapy for cancer, those who have undergone organ transplants, those who are undergoing treatment with steroids, and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. These people should seek advice about drinking water from their physician or health care providers. The EPA/Centers for Disease Control and Prevention (CD) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

About the Following Pages

The pages that follow list all of the federally regulated or monitored contaminants that have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

SUBSTANCE	MONITORING DATE*	MCL	HIGHEST LEVEL DETECTED	MCLG	RANGE	SOURCES OF CONTAMINATION
REGULATED AT TREATMENT PLANT						
BETA/PHOTON EMITTERS	2005	50 pCi/L*	6.5 pCi/L	0	N/A	Decay of natural and man-made deposits
ALPHA EMITTERS	2005	15 pCi/L	5 pCi/L	0	N/A	Erosion of natural deposits
RADIUM 226 & 228 COMBINED	2005	5 pCi/L	0.7 pCi/L	0	N/A	Erosion of natural deposits
ARSENIC	2004 - 2005	10 ppb	4 ppb	0	2 - 4 ppb	Erosion of natural deposits; runoff from orchards
BARIUM	2004 - 2005	2 ppm	0.15 ppm	2 ppm	0.10 - 0.15 ppm	Erosion of natural deposits
CHROMIUM	2004 - 2005	100 ppb	6.7 ppb	100 ppb	0 - 6.7 ppb	Erosion of natural deposits
CYANIDE	2009	200 ppb	70 ppb	200 ppb	30 - 70 ppb	
FLUORIDE	2008 - 2009	4 ppm	1.46 ppm	4 ppm	0.63 - 1.46 ppm	Erosion of natural deposits
NITRATE	2009	10 ppm	1.10 ppm	10 ppm	1.0 - 1.10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion
NITRITE	2005	1 ppm	0.13 ppm	1 ppm	0.01 - 0.13 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion
TURBIDITY	2009	TT = 5 NTU	0.11 NTU	0	0.03 - 0.11 NTU	Soil runoff
		TT = % of samples <0.3 NTU	100%			
TOTAL ORGANIC CARBON	2009	TT	3.30 ppm	TT	1.88 - 3.30 ppm	Naturally present in environment
CHLORAMINES	2009	MRDL = 4.0 ppm	3.8 ppm	MRDLG = 4.0 ppm	0.6 - 3.8 ppm	Disinfectant used to control microbes

SUBSTANCE	MONITORING DATE*	MCL	HIGHEST LEVEL DETECTED	MCLG	RANGE	SOURCES OF CONTAMINATION
REGULATED IN THE DISTRIBUTION SYSTEM						
TOTAL TRIHALOMETHANES	2009	80 ppb	31.0 ppb	N/A	<4 - 31.0 ppb	By-product of drinking water chlorination
HALOACETIC ACIDS (5)	2009	60 ppb	11.6 ppb	N/A	<6.0 - 11.6 ppb	By-product of drinking water chlorination
TOTAL COLIFORM	2009	Presence of coliform bacteria in 5% or more of the monthly samples	1%	0	0 - 1%	Naturally present in the environment
REGULATED AT THE CUSTOMERS' TAP						
LEAD	2009	15 ppb AL	1.72 ppb (90th percentile) No sites exceeded AL	0	0 - 6.91 ppb	Erosion of natural deposits; corrosion of household plumbing systems
COPPER	2009	1.3 ppm AL	0.103 ppm (90th percentile) No sites exceeded AL	1.3 ppm	0.018 - 0.243 ppm	Erosion of natural deposits; corrosion of household plumbing systems
ADDITIONAL MONITORING						
ALUMINUM	2009	0.05 - 0.2ppm ^	0.012 - 0.119 ppm	N/A	N/A	Water Treatment Chemical
CHLORIDE	2009	300 ppm ^	266 ppm	N/A	N/A	Naturally occurring
SULFATE	2009	300 ppm ^	180 ppm	N/A	N/A	Naturally occurring
TOTAL DISSOLVED SOLIDS	2009	1000 ppm ^	848 ppm	N/A	N/A	Naturally occurring
AMMONIA	2009	Not Regulated	0.106 – 0.586 ppm	N/A	N/A	Water Treatment Chemical
CALCIUM	2004 - 2005	Not Regulated	62 ppm	N/A	59 - 62 ppm	Naturally occurring
MAGNESIUM	2004 - 2005	Not Regulated	35 ppm	N/A	14.1 - 35 ppm	Naturally occurring
SODIUM	2009	Not Regulated	233 ppm	N/A	N/A	Naturally occurring
NICKEL	2004 - 2005	Not Regulated	0.002 ppm	N/A	N/A	Erosion of natural deposits
ZINC	2004 - 2005	5 ppm ^	0.004 ppm	N/A	N/A	Naturally occurring
HARDNESS	2008	Not Regulated	259 ppm	N/A	218 - 259 ppm	Naturally occurring
CONDUCTANCE	2009	Not Regulated	1650 micromhos/cm	N/A	N/A	Naturally occurring
TOTAL ALKALINITY	2009	Not Regulated	180 ppm	N/A	N/A	Naturally occurring
UNREGULATED INITIAL DISTRIBUTION SYSTEM EVALUATION FOR DISINFECTION BYPRODUCTS						
CONTAMINANT	YEAR	MCL	AVERAGE LEVEL	MCLG	RANGE	SOURCE OF CONTAMINANT
TOTAL HALOACETIC ACIDS	2008	N/A	15.4 ppb	N/A	0 - 21.8 ppb	By-product of drinking water disinfection
TOTAL TRIHALOMETHANES	2008	N/A	31.9 ppb	N/A	0 - 45.6 ppb	By-product of drinking water disinfection
UNREGULATED CONTAMINANTS						
CONTAMINANT	YEAR	MCL	AVERAGE LEVEL	MCLG	RANGE	SOURCE OF CONTAMINANT
CHLOROFORM	2009	N/A	4.8 ppb	N/A	N/A	By-product of drinking water disinfection
BROMOFORM	2009	N/A	3.5 ppb	N/A	N/A	By-product of drinking water disinfection
BROMODICHLOROMETHANE	2009	N/A	9.5 ppb	N/A	N/A	By-product of drinking water disinfection
DIBROMOCHLOROMETHANE	2009	N/A	14 ppb	N/A	N/A	By-product of drinking water disinfection

The state allows us to monitor for some substances less than once per year because the concentrations of these substances do not change frequently.

Some of our data, though representative, are more than one year old.

^Secondary Constituent Levels set by the Texas Commission of Environmental Quality

What Are Secondary Constituents?

Many constituents, (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Source Water Susceptibility Assessment

A Source Water Susceptibility Assessment for your drinking water sources is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus our protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

Additional Health Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

If you have any questions regarding water quality issues, please contact:

- The Safe Drinking Water Hotline at 1-800-426-4791
- For questions about Lubbock's water quality, call 775-2614
Monday – Friday between 7:30 a.m. and 4:30 p.m.
- For general questions about Lubbock Water Utilities or additional copies of this brochure, call 775-3596
Monday – Friday between 8 a.m. and 5 p.m.
- City Council meetings are typically held the 2nd and 4th Thursday of each month.
- Please recycle this report when finished! For more information on Recycling in Lubbock, call 775-2482.
- **Este reporte incluye informacion importante sobre el agua potable. Para asistencia en espanol, favor de llamar al telefono 775-3596.**

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<http://water.ci.lubbock.tx.us>

Your Annual Water Quality Report

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